Factory Acceptance Test (FAT) Protocol Checklist

Global B2B Group — free buyer checklist. Tick each line at the supplier's works. Record result, evidence and punch-list category for every open item. Full guide: globalb2bgroup.com/factory-acceptance-test-checklist

01 Contract basis: agree the FAT before manufacture starts

The FAT is only enforceable if the contract says what it must prove. Fix this in the purchase order, not in the week before the test.

☐	Clause stating that FAT completion is a condition of shipment authorisation	
☐	Payment milestone released on FAT sign-off, and the retention held to SAT	
☐	Performance figures the equipment must demonstrate, with tolerances	
☐	Who witnesses (buyer, end user, third-party inspector, notified body)	
☐	Notice period the supplier must give before the FAT date (commonly 2–4 weeks)	
☐	Consequences of failure: re-test at supplier's cost, delay damages, escalation route	

02 FAT protocol document: issued and approved before the test

The protocol is the test script. It should be issued by the supplier, reviewed by the buyer and approved in writing before anyone travels.

☐	Equipment identification: tag numbers, serials, drawing and software revisions	
☐	Test list with acceptance criterion and measurement method for every line	
☐	Instruments to be used, with valid calibration certificates attached	
☐	Test product or simulation media to be used, and who supplies it	
☐	Pass / fail / conditional-pass definitions	
☐	Signature blocks for supplier, buyer and any third-party witness	

03 Entry criteria: what must be true before the FAT begins

Most wasted FAT trips are caused by starting a test on equipment that was never ready. Confirm these remotely before booking flights.

☐	Equipment fully assembled in final configuration, not partially built	
☐	Control software at the release version to be shipped, not a test build	
☐	Utilities connected at the specified voltage, pressure and quality	
☐	Safety devices installed, not bypassed or jumpered for convenience	
☐	Documentation pack available on site for review during the test	
☐	Supplier's own internal pre-FAT completed and its report shared	

04 Static and construction checks

Verify what the equipment is before verifying what it does. These checks catch specification deviations that a running test can mask.

☐	Dimensional check against the approved general arrangement drawing	
☐	Materials of construction, surface finish and hygienic design where specified	

☐ Nameplates, CE / UL / ATEX marking and declaration of conformity	
☐ Component brands and models against the approved bill of materials	
☐ Electrical panel build: labelling, segregation, IP rating, cable management	
☐ Guarding, access points, lifting points and maintenance clearances	

05 Functional and control system tests

Prove every function, including the ones nobody wants to trigger on site. Test sequences, not just steady-state running.

☐ Power-up, start, stop, pause and controlled shutdown sequences	
☐ HMI screens, alarms, alarm history, user levels and password control	
☐ Recipe and product-changeover handling, including format changes	
☐ Manual, semi-automatic and automatic modes	
☐ Fault simulation: sensor loss, jam, overload, communication drop, power loss recovery	
☐ Data outputs, traceability records and interfaces to MES / SCADA / ERP	

06 Safety and compliance verification

Safety functions are tested individually and evidenced. This section is normally non-negotiable for conditional acceptance.

☐ Emergency stops: every device, with stop category and stopping time verified	
☐ Interlocked guards, light curtains, safety mats and muting logic	
☐ Safety relay / safety PLC function test and reset behaviour	
☐ Risk assessment and safety file supplied with the equipment	
☐ Earthing, insulation resistance and electrical safety tests with records	
☐ Pressure, thermal or hygiene-related tests required by the applicable standard	

07 Performance test: the section the payment hangs on

Run the equipment at contract conditions, for a defined duration, on representative product — and record the numbers rather than the impression.

☐ Throughput at rated conditions, measured over a stated run time	
☐ Product quality metrics: weight accuracy, seal integrity, temperature, tolerance	
☐ Reject, giveaway and yield-loss rates	
☐ Changeover time measured, not estimated	
☐ Energy, water, air or refrigerant consumption where specified	
☐ Noise level, and cleaning or wash-down validation where applicable	
☐ Continuous run test where contracted (commonly several hours at rate)	

08 Documentation and spares review

Missing documentation delays commissioning far more often than missing hardware. Review it at the FAT while there is still leverage.

☐ O&M manuals in the contract language, in the agreed format	
☐ As-built electrical, pneumatic and mechanical drawings	

☐ PLC / HMI source code, licences and backups handed over as contracted	
☐ Calibration and material certificates	
☐ Recommended commissioning and two-year spare parts lists with prices	
☐ Training plan, and the training material to be used at site	

09 Punch list, categorisation and close-out

Every open item is recorded, categorised and owned. Ambiguity here is what turns a passed FAT into a disputed site handover.

☐ Category A: blocks shipment — must be closed and re-tested before dispatch	
☐ Category B: does not block shipment — must be closed before SAT or commissioning	
☐ Category C: minor / cosmetic — closed during commissioning	
☐ Owner and target date recorded for every item	
☐ Evidence required to close each item (photo, re-test, document)	
☐ Agreed method for verifying Category A re-tests: on site, or by video and report	

10 Sign-off, shipment release and the link to SAT

Sign what was actually proven. A clean signature on an incomplete test transfers the risk to the buyer.

☐ Result recorded as pass, conditional pass with punch list, or fail	
☐ Signatures from supplier, buyer and witness, with date and location	
☐ Written shipment authorisation issued only after Category A items are closed	
☐ Payment milestone released against the signed report, not against a verbal pass	
☐ Preservation, packing and transport requirements confirmed before dispatch	
☐ Items deferred to the site acceptance test listed explicitly in the report	

Result: ☐ Pass ☐ Conditional pass (punch list attached) ☐ Fail — re-test required

Buyer representative	Supplier representative	Witness / third party
Name / date	Name / date	Name / date

Punch list categories — A: blocks shipment, close and re-test before dispatch. B: does not block shipment, close before site acceptance. C: minor, close during commissioning. Free RFQ template and acceptance-criteria wording: globalb2bgroup.com/rfq-guide/rfq-template